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"GIVE STRONG DRINK UNTO HIM THAT IS READY TO PERISH."

### ON THE

## USES OF THE ALCOHOLIC STIMULANTS

IN

# FEVER:

A PAPER READ BEFORE THE

## GLASGOW SOUTHERN MEDICAL SOCIETY,

On the 19th August, 1847.

BY JOHN LEECH, M.D.,

PRESIDENT OF THE SOCIETY;

AND PUBLISHED AT ITS REQUEST.

GLASGOW:

DAVID ROBERTSON, BOOKSELLER TO HER MAJESTY.

MDCCCXLVIII.



TO

# GENERAL SIR THOMAS MAKDOUGALL BRISBANE, OF BRISBANE AND MACKERSTONE, BART.,

G.C.B. AND G.C.H., &c.,

#### THIS SHORT ESSAY,

BEING THE FIRST PUBLISHED DOCUMENT IN CONNECTION WITH THE

TRANSACTIONS OF THE

GLASGOW SOUTHERN MEDICAL SOCIETY,

IS DEDICATED,

AS A MARK OF GRATITUDE FOR HIS CONSIDERATE FRIENDSHIP

TO THE LATE REV. JOHN LEECH, OF LARGS,

IN BESTOWING SUBSTANTIAL KINDNESS ON HIS SON,

THE AUTHOR.

77, SOUTH PORTLAND STREET, GLASGOW, 16th August, 1848.

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### INTRODUCTORY NOTICE.

UNDER the title, Alcoholic Stimulants, is comprehended the extensive class that contain Alcohol (more familiarly known under the name of Spirit of Wine) in their composition.

They have usually been arranged under three divisions, viz.—Wines, Ales, and Ardent Spirits.

The varieties that are comprehended under each of these divisions are very numerous.

In all of these varieties, it is to the Alcohol that enters into their composition that we are to attribute their active properties.

While this is the case, we yet find that the presence of other substances associated with the Alcohol, tend in a material degree to modify its action upon the living system, both in health and while under disease.

It is this admixture of other substances with the Alcohol which constitutes not only those peculiarities in taste, but also the more important properties that distinguish the classes of Alcoholic Stimulants, and the several varieties under each class, from one another.

The Essayist noticed these in detail in an Introductory Paper, which may bye and bye be presented to the Public, should the subject be deemed of sufficient interest.

To discriminate between the use and the abuse of a class of substances that have been the cause of enormous moral and physical injury to the family of man wherever they have been introduced, is confessedly a subject of no ordinary delicacy.

The benefits to society that have resulted from the Temperance Movement, are of the highest possible description. They have not, however, been free from alloy; and the injury done to the cause by the warmest supporters of it, in advancing statements that are not consistent with fact, however that may tend to add to the number of adherents, is yet calculated eventually to sap the very foundations upon which legitimate grounds, to warrant expectations for a permanent benefit, must rest, and thus damage that cause their hearts are so interested to advance.

It appeared to him that the medical profession were too often prejudiced against the Temperance Movement, more by the bold ignorance that characterized the assertions of many who were engaged in promoting its advancement, than from any wish to retard that in which it was their duty and high privilege to have taken the lead; and have, on this account, been in a manner dragged, with a bad grace, to give an unwilling assent to what could no longer be resisted.

In reformations of every kind, it is no less remarkable than true, that it has always been those individuals who, thinking little about the philosophy of the thing, formed their opinions from facts that obtruded themselves on their notice in a practical shape, who have really been the original reformers, and to whom (however mean our estimate may be of their talents and opinions) we are bound to concede the honour of giving the first impulse to the Movement. But whoever may have been the original promoters of the Temperance Movement, it is now the duty of every man, and certainly the special duty of the guardians of the public health, to use their influence towards guiding it till arrived at a state of maturity, and resting it upon principles of universally acknowledged stability.

The Essayist has to conclude the present short Introductory Notice with this general remark upon the potent class of substances under discussion, and which applies to everything else of a like nature—That the Alcoholic Stimulants are a medicine or a poison according to the discretion and the moderation with which they are used, and the skill and judgment which direct their medicinal employment.

## THE USES OF ALCOHOLIC STIMULANTS IN FEVER.

"GIVE STRONG DRINK UNTO HIM THAT IS READY TO PERISH."

According to the arrangement proposed in a Paper introductory to a Series on the Medical Uses of Alcohol, which was read by the Essayist at a meeting of the Glasgow Southern Medical Society, held on the 23d day of July, 1846, it will possibly be in the recollection of such of the members now assembled as did me the honour to be present on the occasion, that I intimated my intention, under the approval of this learned Society (by whose instructions I at first undertook the rather onerous task of attempting to discuss this important and extensive subject), to adopt as the plan of my arrangement, the classification of disease by Dr. Cullen, for reasons I then distinctly specified, commencing with the 5th genus of the first order of the class Pyrexiæ, viz., Febres; and to night I intend to take up the Medical Uses of Alcohol in connection with continued Fever—a question undoubtedly of vital importance at the present hour.

Little, certainly, did I anticipate when I read the former paper, that, in the brief period of a single year, such dreadful havoc should have been made in the population of this empire, more particularly in Scotland, and yet more extensively in the Sister Isle, by the prevalence of fever to a numerical amount unprecedented in the remembrance of the oldest member of the pro-This circumstance, taken in connection with the scarcity fession. that existed of the common necessaries of life, owing to the total failure of the potato crop of last season—a main dependance of the toiling population in Scotland, and the all-in-all in Ireland as well as a general deficiency in all sorts of agricultural produce, with a murrain amongst cattle; gaunt famine, and her accompanying demon fell disease, has committed greater havoc amidst the dwellings of suffering humanity, than did ever the most sanguinary conflict carried into the very bosom of our loved fatherland.

The state of abject misery, the utter wretchedness into which tens of thousands of our teeming population have been thrown in consequence, is beyond the power of description; and a remedy to meet the urgency of the increasing cries for help seems to have baffled

the sincere and utmost attempts of our legislators; who, with a manliness of purpose above all praise, forgetting their party feuds in the overwhelming urgency of the case, united their energies to roll the incubus from the breast of the nation, and, by the total repeal of the bread tax, so long cherished by a powerful party (as their household idol), gave practical demonstration that they were sincere in their professions.

But, in spite of all their attempts, even while backed by the cordial co-operation of the monied interests, had not the merciful interposition of Him who causes his sun to rise, and his rain to descend upon the just and upon the unjust; and who, in tender compassion for his frail creatures, has called to the angel of destruction, "It is enough; stay thy hand!" and has blessed the springing of the year, and the further advancing fruits of the soil, giving us a prospective hope that his anger is turned away, who could tell what might not have been the awful result in turning man to destruction had such another season as the past been again assigned to us?

The waste of enormous quantities of grain in the process of distillation, notwithstanding the prevailing famine, the principal predisposing cause of fever, is a glaring anomaly, inexplicable upon any rational principle.

While a public fast was proclaimed at head-quarters, and, hand uplifted to heaven, we were imploring the Divine interposition to avert the calamity,—with the other hand, those very bounties we were thus humbling ourselves to procure, were by us recklessly destroyed, and that, too, by being perverted into an evil and a curse.

The consistency of such conduct is of a parallel to that of a party whose premises having taken fire, stretches one hand to Heaven imploring help, while with the other he is actively engaged in tossing his goods and chattels into the devouring element.

Fire is an invaluable agent, however, when legitimately employed; and so is alcohol a most important addition (when skilfully used) to our pharmacopæia, from whence it first came, and to which it ought to be confined.

In no case is the apparent anomaly more strikingly verified than in the treatment of the disease we have to consider in its relations to alcohol; nor do I think I overstep the bounds of moderation, when I assert that I believe it to have been verified in the universal experience of the profession (the exceptions are undeserving of notice), that without the aid received from some one or other of the class of alcoholic stimulants, in all of which it is to the

alcohol, if not alone, yet most certainly principally, that we are to attribute the active benefit in fever;—I say that without this assistance we are certain to incur the loss of a heavy per centage in fever cases, that might otherwise have been successfully carried through by its timely and judicious administration.

Besides, a large majority of such as survive the fever, when the legitimate stimulant has been neglected, give indications of the injury sustained in consequence of this omission, by a train of morbid symptoms indicative of chronic disease, affecting some important function; which, though it may not often prove mortal, may yet render the future life of the unfortunate one of endurance rather than of enjoyment, and thus a continued memento of the unhappy neglect.

Hence the vital importance of a thorough and accurate acquaintance with three circumstances to be briefly considered.

- 1st. At what stage of fever is the use of alcoholic stimulants required?
- 2d. What are some of the more immediate symptoms that indicate the necessity of their employment?
- 3d. What are a few of the principal rules to guide us in regulating, 1st, the quantity; and, 2d, the particular form in which alcohol is to be prescribed?
- Qy. I. At what stage of fever is the use of alcoholic stimulants required?

Writers on fever seem generally to agree in considering that alcoholic stimulants are seldom advisable during the early stages of fever, much, of course, depending upon the peculiar type of the fever;—the constitution, and previous habits of the patient.

Dr. Armstrong says, "perhaps the period is fast approaching when the diffusible stimuli will be universally prohibited in the earlier stages of all ardent fevers, and it may be laid down as a principle that they are very detrimental during the stage of excitement. It has, indeed, been contended that wine does not stimulate so much in fever as in health, and, strange as it may appear, it is still the custom of some practitioners to pour in large quantities of wine indiscriminately throughout all the stages of genuine typhus.

"It may happen that the energies of the constitution may prevail against the combined injury of the treatment and the disease, and this injudicious system have the merit of the recovery falsely attributed to the wine, and thus a dangerous error be propagated and respected, as when powerful stimuli are administered early, they have a tendency to produce inflamation or congestion in the viceral organs, and thus materially stand in the way of recovery."

So far from stimulants being proper or necessary in the early stage of typhus, it is the opinion of the majority of the profession at the present day, that the lighter and cooler the regimen, the better for the patient.

The same rule is applicable, in general, to the second stage of fever, nay, even to the third, or, as it has not inaptly been designated, the stage of collapse, as in the milder cases of simple typhus, little will be needed, the powers of nature in most instances, assisted by light nutriment, being fully adequate to the recovery.

In a word, it is my conviction, and I mean no offence in stating it, that fever cases would get on infinitely better by being merely let alone, than they sometimes do by anxious intermeddling.

On the other hand, however decided I may be against the abuse, I candidly admit the benefit derived from the use of alcohol legitimately employed in typhus, having had many opportunities of witnessing this in the latter stages of genuine typhus, when accompanied by real debility.

But even on the approach of collapse, it is prudent to be at first sparing in the administration of the stimulant, while the effects must be regularly and carefully observed and attended to.

Should we find that by its employment a general warmth and moisture pervade the surface—that the tongue gets cleaner, and respiration less hurried and fitful—the pulse slower, fuller, yet soft and more regular—we are certainly warranted to persevere in its further administration.

But should we find the irritability and restlessness increased—the skin continue hot and dry, and the tongue more parched—its suspension for a time is proper.

We ought not hastily, however, to abandon its use, but lessen the quantity, and make a second, and even a third trial of its effects, leaving a reasonable interval of time for observation.

There is a circumstance under the present head which merits particular notice, viz.:—The surprising rapidity with which we usually find collapse take place in parties addicted to intemperance, and who, on this account, require an earlier, and, during the whole course of the fever, a more liberal supply of the stimulant than patients of temperate habits. Unless this be attended to, such patients are certain to sink from mere debility.

The above well substantiated fact furnishes a powerful argument for total abstinence from all sorts of alcoholic preparations by persons in health, as a habit not only unnecessary, but in every case more or less injurious to health and vigour; while they place the chances of the recovery of the party addicted to them, when under sickness, especially in typhus, on the wrong side of the balance.

II. What are some of the more immediate symptoms indicating the necessity of alcholic stimuli in fever?

These are too numerous for us to consider in minute detail in our limited space, and I will be content with a mere enumeration of a few of the more prominent.

When, after adopting general and local measures calculated to subdue the excitement, we shall yet find, that, while the inflammatory symptoms are relieved, still the delirium continues unabated, or when we learn that the patient had been addicted to intemperance, or that any circumstance arising from his previous habits or occupation has a tendency to excite or to exhaust the sensorium—when the pulse gets small, weak, and irregular—the skin cold and moist when injudicious depletion had been adopted, or excesive diarrhæa induced or arisen spontaneously—when the delirium is low muttering, or accompanied with twitching of the limbs—when the abdomen feels tympanitic, with cold extremities, and the patient is laid, if we may be allowed the expression, in a state of supine prostration, the urgent necessity that exists for the exhibition of stimulants is quite evident; due caution and attention to the other contra-indicating symptoms being premised at their admission, and continued throughout during their administration.

III. What are a few of the principal rules to guide us in regulating, 1st, the quantity; 2d, the particular form in which alcohol is to be administered in fever cases.

(1st.) As regards quantity. It is superfluous to mention here that the age, the sex, the habits of the patient, as well as the type of the prevailing fever, each and all, require our careful attention; hence every case requires to be studied individually, as also in its relation to extrinsic circumstances; and the very frequent embarrassment felt by us from the difficulty that exists of ascertaining the naked facts, are sometimes sufficiently annoying, and I would here make a remark or two on this subject, which, though they be of a general nature, come under the present head without impropriety.

How often do we find the relatives and other parties about the patient, attempt, as it were, to mislead the medical attendant by false, or, at all events, one-sided statements, one is almost tempted to think from a misconception that, could they manage to get the doctor to view the circumstance of the case through the coloured medium which their representation tends to give, the case would (out of sympathy for their anxiety, it is presumed) accommodate itself to their representations!

Is it to be wondered at, or is the medical profession to blame, for the remarkable scepticism that is so prevalent amongst the professors of it, seeing that no inconsiderable amount of their labour is not unfrequently expended for the purpose of expiscating the facts from the midst of a tissue of assertions, which, should they not be intended for falsehoods, are most certainly evasions, and have the same ostensibly intended object, viz., an unfair representation of the patient's previous condition?

We are not warranted in taking mere statements as any data upon which to found our practice, not even from otherwise very sensible, people. Rest assured, those very parties who thus treat us so unfairly, will not fail, in the event of matters going wrong with our patient, to be the first to blame us, and if not to ourselves, yet they will proclaim our faults to others, in a way sometimes calculated to injure us deeply, not the less so that they take good care not to make us aware of their strictures, nor in any way to implicate themselves.

But to return from this digression, I remark, that cases of typhus are not so frequent amongst infants and very young persons as with adults, they being seemingly not so susceptible of the contagion; and has not each of us witnessed amidst the haunts of poverty, a mother labouring under fever, with an infant at her bosom lying unscathed? It is true the fountain from which it drew its nourishment will be either dried up, or the secretion vitiated by the influence of the disease; but notwithstanding the natural result of a deficient or a vitiated ingesta, the little creatures escape with impunity.

That infants and very young children are occasionally seized with typhus is no doubt true; but such cases are more simple and mild, and their treatment proportionally so when compared with fever in adults.

I have had under treatment more than one case of typhus in infants; the rule followed, with scarce an exception, has been to offer the infant or young person some diluted alcoholic preparation.

When relished, and preferred to other fluids, by a craving for more, I have, without hesitation, been in the habit of indulging this inclination; nor am I aware (speaking advisedly) of meeting with a single instance where there was not cause for congratulation in the favourable result.

Nature, surely, must dictate that singular craving in infants for a substance so abhorrent to their natural healthy taste, unless, indeed, deprayed by the improper indulgence of the mother, and which only renders the propriety of the rule being observed more stringent.

The same rule occasionaly holds good in the case of adults, regarding whose temperate habits there was no ground to doubt, and who may have even had a sort of antipathy amounting to aversion to stimulants of all sorts, and who yet in fever, particularly at the latter stages, manifest a craving avidity to an extent quite startling, and we have not met with a case where, under such circumstances, we had cause to regret indulging this to its full extent. Sir John Pringle pointed out strongly the necessity of attending to this desire. "When the low state of fever," says he, "was present, the sick had frequent cravings for cordials and wine; they drank the wine greedily; but when they were in a state in which the use of cordials was questionable, they were careless about the wine."

But however proper it be that we make ourselves acquainted with the peculiar circumstances before mentioned, it is far from prudent to confide in this, and we must be guided in our practice by more definite principles.

To counteract exhaustion is undoubtedly a main object intended by the administration of alcohol in the latter stage of typhus, and the quantity given must be entirely regulated by the effects produced; but no infallible rule to suit the circumstances of every case can be laid down.

It is a matter of prudence to commence with moderate, or rather small doses, and the effect noted from time to time, which we find to vary in different individuals, and even the same individual at different times. Many eventually will take a bottle of wine in the course of a few hours without any marked effect, even though they have not been previously habituated to the stimulant, and this may be still further increased if required; it is not the quantity given, but the effect produced upon our patient, that must regulate our prescription; and by careful attention to the state of the pulse, the tongue, and the temperature, we will be enabled to discriminate.

It is astonishing sometimes to witness the effect produced by

stimulants poured into the patient in large and repeated doses, in cases that are seemingly altogether hopeless, at that critical period when the patient, to human observation, is passing rapidly towards "that bourne from whence no traveller returns"-when weeping relatives and friends are waiting around the bedside of the prostrate sufferer, whose near approach to his long last sleep has broken through the selfish cordon which kept them at a distance when the danger was less imminent—when the medical attendant, casting aside the usual professional etiquette in his anxiety for his patient, in the combined capacity of physician and sick nurse with his own hand administering the "strong drink unto him that is ready to perish," at length finds his patient's pulse, recently only flickering previous to extinction, begin to rally; get gradually firmer; its vibrations more regular; his respiration, which had been tumultuous and interrupted, now assuming its natural condition; a genial warmth take the place of the chilly cold in his extremities, and the warm life's current once more mantling over the recent deathpaled countenance, and the patient thus led, it might be said, out of the valley of the shadow of death, into a condition of comparative security.

Surely there can be no more god-like position for a fellow worm than the relation in which the medical party is honoured, by the Divine permission, in such a case to stand to the patient, who, under the Father of Spirits, is as much indebted to him for his remaining existence as a living being in this world, as though he had received it from his hands.

It is to be lamented, however, that in a vast majority of instances such as the present, however much the physician may be caressed, and extensive protestations made, no doubt in sincerity at the moment, yet these feelings soon, like the morning cloud, vanish away, and the party who may thus have been laid under a debt of gratitude, which he can never adequately repay, will not unfrequently return evil for good; nay, even employ that tongue which, but for his well-directed skill, would have been silent in the tomb, in basely slandering his benefactor.—The deepest injury the Essayist ever received from the hand of man, was from a rescued patient.

But, 2d, what are the principal rules to guide us in regulating the form best suited for the exhibition of alcohol in cases of fever?

As I have already taken notice of this generally, I have only a few words to add to this part of the subject.

With regard to ardent spirits in fever cases, I think it is a mat-

ter of minor consequence whether rum, gin, brandy, or the more easily procured whisky, is prescribed; provided each be genuine of its kind, the selection may be left with all propriety to the patient, and taken either with hot water and sweetened with sugar, or with cold water made into punch.

Of malt liquors, good bottled London or Dublin stout answer well when relished, particularly after the crisis, and sometimes even during collapse, when wine such as we are able to procure, and spirits, do not seem to agree. At bed time a draught of porter or ale, answering the double purpose of a stimulant and soporific. Small beer, table beer, gingerade, are often much relished when the thirst is urgent, but beyond the immediate gratification of thirst, their benefit does not extend, while the ultimate effect is to increase it; and I prefer soda water, toast and water, and, best of all, cold spring water, as liable to fewest objections, while serving the immediate purpose of relieving thirst equally well.

With regard to wine, I think favourably of the white when stimulation alone is wanted, it being less apt to constipate, and more generally relished than the red.

However, when there is a tendency to diarrhoea, the port is to be preferred. I also regard the tonic and antiseptic properties attributed to port wine as indicated in typhus, of a low and putrid type.

But it is of the last importance that we make ourselves certain when wine is prescribed by us, that it is wine that is administered to our patient, and not a trashy compound of alum, logwood, raw grain whisky, &c., which is not unfrequently retailed under the name of port wine to the poor, and occasionally to parties in better circumstances.

I have in more than one instance had cause to lament the very great difficulty that existed in procuring wine of a genuine quality, convinced, as I was, that to the inferior quality of what was called wine, was to be attributed a frequent cause of disappointment, especially among the working classes, who depend for a supply upon a class of retailers who have not obtained their stock of wine until it has passed through many previous hands, and gained no advantage in purity by each subsequent exchange.

And here permit me to request special attention to an advantage of no mean nature, enjoyed by the hospital patient over patients of the same class under the care of the private practitioner, viz., that the hospital is supplied with all the wine required from the first houses in the trade, and which I have reason to know is genuine as imported.

The difficulties experienced by gentlemen in private practice in obtaining sound wine in the treatment of their fever cases, is doubtless one cause of that frequent disappointment which they experience—not owing to any fault of theirs, but arising from an evil over which they have as yet little control, and dating its source from that innate selfishness and cupidity that leads man to prey upon the necessities of his more helpless fellowman, some effectual remedy for which is well worthy the anxious attention of this society, believing, as I do, and without hesitation giving it as my conviction, that when sound wine can be procured, it far surpasses, for the general purposes of a stimulant, all the other modifications of alcohol in the treatment of typhus.

I do not consider it requisite to take more than a cursory glance at the more expensive wines, as hock, hermitage, malmsey, claret, champagne, Burgundy, &c., although each of these varieties has been recommended by gentlemen of high standing in the profession, the price being tantamount to a prohibition against their being made generally available in practice; neither, from what little experience I have had, nor, judging from what I have read, do I think they have any peculiar claim to pre-eminence sufficient to render their general employment matter of high importance at their present ex-Perhaps, however, the low Rhenish and French pensive rate. wines, of which the varieties are numerous, could they be obtained duty free, so as to bring them within the reach of the general public, might be found to answer the purpose of a stimulant in fever cases admirably well. The testimony of Sir Everard Home, Sir William Burnet, Dr. William Chambers, physician to her Majesty the Queen Dowager, and numerous eminent authorities, demonstrate the benefit derived by their administration amongst the rich and nobles and I doubt not the result would be equally satisfactory could it be extended to the suffering poor.

Finally, gentlemen (and I beg to close this subject with this single remark), that whatever may tend as a discouragement to the food of this country being converted into a substance which is admitted to be a cause of infinite moral and physical evil, particularly after the dreadful experience we have had during the late famine, is a question of vast practical, and even national importance.